

What is claimed is:

1. A method comprising the steps of:

providing a U-shaped metalized pad on a surface of a printed circuit board;

providing a component lead having an extremity;

disposing solder on the pad;

heating the solder to a molten state so that the molten solder forms a solder mound having a U-shaped lateral cross section conforming to the U-shaped metalized pad, the solder mound having a first arm and a second arm and having a lateral aperture extending therebetween for receiving the extremity of the component lead, the solder mound having a bridge portion extending between the first and second arms of the solder mound;

cooling the solder mound so as to harden the solder mound;

disposing the extremity of the component lead proximate to the lateral aperture between the first arm and second arm of the solder mound;

registering the extremity of the component lead in the lateral aperture between the first and second arm of the solder mound, so as to register the extremity of the component lead with respect to the pad; and

heating the solder mound to a molten state so as to solder the component lead to the pad.

1 2. A method as in claim 1 wherein the step of registering the extremity of the
2 component lead includes sliding the extremity of the component lead in contact with
3 at least one of the arms of the solder mound to register the component lead with
4 respect to the pad in a lateral dimension perpendicular to the arms of the mound, so
5 that the lateral aperture of the solder mound receives the extremity of the
6 component lead.

1 3. A method as in claim 1 wherein the step of registering the extremity of the
2 component lead includes sliding the extremity of the component lead in contact with
3 both arms of the solder mound to register the component lead with respect to the
4 pad in a lateral dimension perpendicular to the arms of the mound, so that the lateral
5 aperture of the solder mound receives the extremity of the component lead.

1 4. A method as in claim 1 wherein the step of registering the extremity of the
2 component lead includes sliding the extremity of the component lead into contact
3 with the bridge portion of the solder mound to register the component lead with
4 respect to the pad in a lateral dimension perpendicular to the bridge portion of the
5 solder mound.

1 5. An apparatus comprising:

2 a printed circuit board;

3 a U-shaped metalized pad deposited on a surface of the printed circuit board; and

a means coupled with the U-shaped metalized pad for registering an extremity of a
component lead with respect to the pad.

1 6. An apparatus comprising:

2 a printed circuit board;

3 a U-shaped metalized pad deposited on a surface of the printed circuit board;

4 a solder mound contacting the U-shaped metalized pad, the solder mound having a
5 U-shaped lateral cross section conforming to the U-shaped metalized pad.

1 7. An apparatus as in claim 6 wherein the solder mound includes a first arm for
2 registering a component lead with respect to the pad in a lateral dimension
3 perpendicular to the arms of the solder mound.

1 8. An apparatus as in claim 6 wherein the solder mound includes a first arm and
2 a second arm for registering a component lead with respect to the pad in a lateral
3 dimension perpendicular to the arms of the solder mound.

1 9. An apparatus as in claim 6 wherein the solder mound includes a first arm, a
2 second arm, and a lateral aperture extending between the arms of the solder mound
3 for receiving an extremity of the component lead.

1 10. An apparatus as in claim 6 wherein the solder mound includes a first arm, a
2 second arm, and a bridge portion extending between the arms of the solder mound
3 for registering the component lead with respect to the pad in a lateral dimension
4 perpendicular to the bridge portion of the solder mound.

1 11. An apparatus as in claim 6 wherein the U-shaped metalized pad has a first
2 arm having a respective width dimension within a range of approximately three
3 thousandths of an inch to approximately fifteen thousandths of an inch.

1 12. An apparatus as in claim 6 wherein the solder mound has a first arm having a

width dimension within a range of approximately three thousandths of an inch to approximately fifteen thousandths of an inch.

13. An apparatus as in claim 8 wherein the lateral aperture of the solder mound has a width dimension within a range of approximately five thousandths of an inch to approximately twenty thousandths of an inch.

14. An apparatus as in claim 6 wherein the U-shaped metalized pad has a first arm having a respective length dimension within a range of approximately twenty thousandths of an inch to approximately twenty thousandths of an inch.

15. An apparatus as in claim 6 wherein the solder mound has a first arm having a respective length dimension within a range of approximately twenty thousandths of an inch to approximately twenty thousandths of an inch.

16. An apparatus as in claim 6 wherein the solder mound has a height dimension within a range of five thousandths of an inch to twenty thousands of an inch.

17. An apparatus as in claim 6 further comprising:

an array of U-shaped metalized pads deposited on a surface of the printed circuit board;

a plurality of solder mounds each contacting a respective one of the U-shaped metalized pads, the solder mounds each having a respective U-shaped lateral cross section conforming to the respective U-shaped metalized pad, each solder mound including a respective first arm and second arm, a respective lateral aperture extending between the arms of each solder mound for receiving an extremity of a respective component lead; and a respective bridge portion extending between the

10 arms of each solder mound.

1 18. An apparatus as in claim 10 wherein each U-shaped metalized pad of the
2 array is similarly oriented.

1 19. An apparatus as in claim 10 wherein the array of U-shaped metalized pads
2 are arranged in a row.

1 20. An apparatus as in claim 10 wherein the pads are arranged in a spaced apart
2 relation with a range of thirty thousandths of an inch to one hundred thousandths of
3 an inch.